

## CLAIMS

1 Oxidizing composition for keratin fibres, in particular for human keratin fibres and more particularly the hair, comprising, in a  
5 cosmetically acceptable medium:

(a) at least one oxidizing agent chosen from the group formed by hydrogen peroxide and compounds capable of producing hydrogen peroxide by hydrolysis, or mixtures thereof,

10 (b) at least one copolymer based on acrylamido-2-methylpropanesulphonic acid and acrylamide, and

(c) at least one polymer chosen from crosslinked 2-acrylamido-2-methylpropanesulphonic acid homopolymers or amphiphilic copolymers consisting of at least one sequence of 2-acrylamido-2-methylpropanesulphonic acid units and at least one unit comprising a  
15 hydrophobic portion.

2 Composition according to Claim 1, characterized in that it comprises:

(a) hydrogen peroxide,

20 (b) at least one copolymer based on acrylamido-2-methylpropanesulphonic acid and acrylamide, and

(c) at least one crosslinked 2-acrylamido-2-methylpropanesulphonic acid homopolymer.

25 3 Composition according to Claim 1, characterized in that it comprises:

(a) hydrogen peroxide,

(b) at least one copolymer based on acrylamido-2-methylpropanesulphonic acid and acrylamide, and

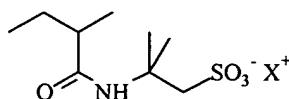
(c) at least one amphiphilic copolymer consisting of at least one sequence of 2-acrylamido-2-methylpropanesulphonic acid units and at least one unit comprising a hydrophobic portion.

5            4 Composition according to Claim 3, characterized in that it comprises, as amphiphilic copolymers (c), the 2-acrylamido-2-methylpropanesulphonic acid/ethoxylated cetearyl methacrylate copolymer crosslinked with trimethylolpropane triacrylate.

10           5 Composition according to Claim 2, characterized in that the crosslinked poly(2-acrylamido-2-methylpropanesulphonic acid) homopolymer (c) comprises, randomly distributed:

-from 90% to 99.9% by weight of units of general formula (1) below:

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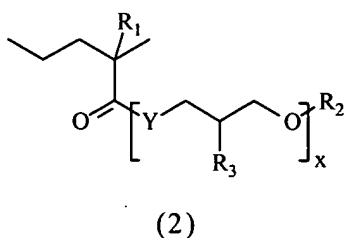
in which  $X^+$  denotes a cation, preferably the ammonium ion, or a mixture of cations, not more than 10 mol% of the cations possibly being protons  $H^+$  ;

20           - from 0.01% to 10% by weight of crosslinking units derived from at least one monomer containing at least two olefinic double bonds; the weight proportions being defined relative to the total weight of the polymer.

25           6 Composition according to Claim 3, characterized in that the amphiphilic copolymers have a weight-average molecular weight ranging from 20 000 to 10 000 000, preferably from 50 000 to 8 000 000 and more particularly from 100 000 to 7 000 000.

7 Composition according to either of Claims 3 and 6,  
 characterized in that the amphiphilic copolymers comprise at least one  
 sequence of monomers chosen from ethylenically unsaturated  
 hydrophobic monomers comprising at least one hydrophobic portion  
 5 containing from 6 to 50 carbon atoms, preferably from 6 to 22 and more  
 particularly from 12 to 18 carbon atoms.

8 Composition according to Claim 6, characterized in that the  
 ethylenically unsaturated hydrophobic monomer is chosen from the  
 10 acrylates or acrylamides of formula (2) below:



15 in which  $R_1$  and  $R_3$ , which may be identical or different, denote a  
 hydrogen atom or a linear or branched  $C_1$ - $C_6$  alkyl radical, (preferably  
 methyl); Y denotes O or NH;  $R_2$  denotes a hydrophobic hydrocarbon-  
 based radical containing from 6 to 50 carbon atoms, more preferably  
 from 6 to 22 carbon atoms and even more preferably from 6 to 18 carbon  
 20 atoms; x denotes a number of moles of alkylene and ranges from  
 0 to 100.

9 Process for the oxidation dyeing of human keratin fibres and  
 in particular the hair, using:

25 (i) a dye composition comprising, in a support that is suitable  
 for dyeing keratin fibres, at least one oxidation dye precursor, and

(ii) the oxidizing composition as defined in any one of Claims 1 to 8.

10 Dyeing process according to Claim 9, according to which:

- 5 (i) the dye composition is mixed, at the time of use, with the oxidizing composition claimed,
- (ii) the mixture obtained is then applied to the keratin fibres
- (iii) the mixture is left to act for 3 to 50 minutes approximately and preferably 5 to 30 minutes approximately,
- 10 (iv) steps of rinsing, washing with shampoo, rinsing again and finally drying are then performed.

11 Dyeing process according to Claim 10, according to which the dye composition and the oxidizing composition claimed are sequentially applied, in any order, with or without intermediate rinsing.

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12 Process for treating human keratin fibres and in particular the hair in order to permanently reshape these fibres, in particular in the form of permanent-waved hair, this process comprising the following steps:

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- (i) a reducing composition is applied to the keratin material to be treated, the keratin fibre being placed under mechanical tension before, during or after the said application,
- (ii) the keratin fibre is optionally rinsed,
- 25 (iii) the oxidizing composition as defined in any one of Claims 1 to 8 is applied to the optionally rinsed keratin fibre,
- (iv) the treated fibre is then rinsed.

13 Process for bleaching or stripping human keratin fibres and in particular the hair, comprising the following steps:

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(i) the oxidizing composition as defined in any one of Claims 1 to 8 is applied to the keratin fibre,

(ii) the treated fibre is then rinsed.

5           14 2-compartment device for dyeing keratin fibres, in particular human keratin fibres and more particularly the hair, characterized in that a first compartment contains the dye composition and a second compartment contains an oxidizing composition as defined in any one of Claims 1 to 8.

10           15 2-compartment device for permanently reshaping keratin fibres, in particular human keratin fibres and more particularly the hair, characterized in that a first compartment contains a composition containing at least one reducing agent that is suitable for permanently  
15           reshaping keratin fibres and a second compartment contains an oxidizing composition as defined in any one of Claims 1 to 8.

          16 2-compartment device for bleaching keratin fibres, in particular human keratin fibres and more particularly the hair,  
20           characterized in that a first compartment contains an anhydrous powder or paste containing at least one persalt, and a second compartment contains an oxidizing composition as defined in any one of Claims 1 to 8.